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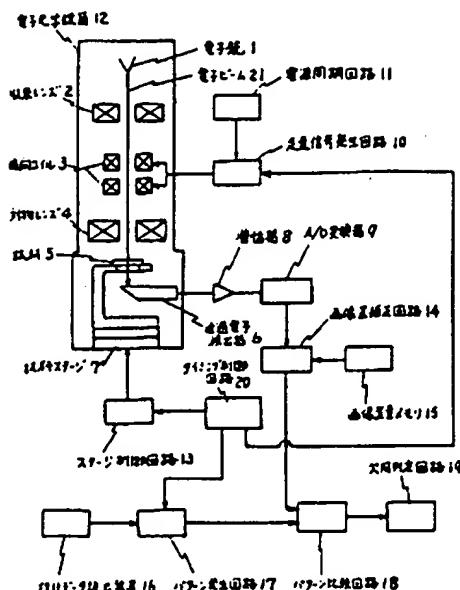
APPLICATION DATE : 13-05-88  
 APPLICATION NUMBER : 63114642

APPLICANT : HITACHI LTD;

INVENTOR : FUSHIMI SATOSHI;

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TITLE : ELECTRON BEAM DEVICE WITH  
 SCANNING VIBRATION CORRECTION



ABSTRACT : PURPOSE: To obtain a detection image with high precision at a high speed by correcting the distortion by the scanning vibration of the detection image obtained for a subject sample by an image detecting means with the distortion quantity by the scanning vibration stored in a memory means as the correction quantity.

CONSTITUTION: An electron beam 21 receives the effect of the external floating magnetic field before reaching a sample 5 from an electron gun 1 and is swayed, the number of permeating electrons is changed by the presence of the circuit pattern of the sample 5. The permeating electrons are detected by a permeating electron detector 6, the image distortion by the scanning vibration of the detection image is corrected by an image distortion correcting circuit 14 based on the scanning vibration distortion quantity for a reference sample stored in an image distortion quantity memory 15 via an amplifier 8 and an A/D converter 9. The detection pattern signal of the sample 5 corrected with the image distortion by the circuit 14 after being detected by an electron optical lens barrel 12 and the defectless reference pattern signal of a pattern generating circuit 17 are positioned and compared by a pattern comparing circuit 18. The image distortion by the scanning vibration of the floating magnetic field of the detection image can be corrected by the real-time processing.

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